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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,445	12/08/2003	Robert Walker	2003P54211US/I331.125.101	2272
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Dicke, Billig & Czaja, PLLC Fifth Street Towers, Suite 2250 100 South Fifth Street Minneapolis, MN 55402				
			EXAMINER TAN, VIBOL	
			ART UNIT 2819	PAPER NUMBER

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/730,445

**Applicant(s)**

WALKER, ROBERT

**Examiner**

Vibol Tan

**Art Unit**

2819

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 11,12,17,18,20-22 and 28-31 is/are allowed.  
6) ☒ Claim(s) 1-10,13-16,23,26 and 27 is/are rejected.  
7) ☒ Claim(s) 19,24 and 25 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 13-16, 23, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Choi US 2004/0207544 A1).

In claim 1, Choi teaches all claimed features in Figs. 1-4, a chip to chip interface comprising: a driver (102 or 202) configured to provide a first signal (TX\_D1) in response to a change in even data (RX\_D1\_even) in a double data rate data stream [0027] and a second signal (TX\_D2) in response to a change in odd data (RX\_D1\_odd) in the double data rate data stream; and a receiver (104 or 404) configured to receive the first signal (TX\_D1) and the second signal (TX\_D2) and toggle a first bit (RX\_D1) in response to the first signal and toggle a second bit (RX\_D2) in response to the second signal.

In claims 2-8, Choi further teaches the chip to chip interface of claim 1, wherein the receiver (104 or 404) is configured to provide the first bit (RX\_D1) to represent the first-even data and to provide the second bit (RX\_D2) to represent the odd data; wherein the even data is positive edge data (responsive to positive edge of a clock

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signal) in the double data rate data stream; wherein the odd data is negative edge data (responsive to negative edge of a clock signal) in the double data rate data stream; wherein the receiver is configured to provide the first bit (RX\_D1) to a circuit at each positive edge of a clock signal; wherein the receiver is configured to provide the second bit (RX\_D2) to a circuit at each negative edge of the clock signal; wherein the first signal (TX\_D1) is a high voltage pulse (logic 1); and wherein the second signal (TX\_D2) is a low voltage pulse (logic 0).

In claims 9-10, Choi teaches all claimed features in Figs. 1-4, a chip to chip interface comprising: a driver (102 or 202) configured to provide a first signal (TX\_D1) in response to a change in first data (RX\_D1\_even) at one edge of a clock signal (positive edge) and a second signal (TX\_D2) in response to a change in second data (RX\_D1\_odd) at another edge of the clock signal (negative edge); and a receiver (204 or 404) configured to receive the first signal and the second signal and toggle a first bit (RX\_D1) in response to the first signal and toggle a second bit (RX\_D2) in response to the second signal, wherein the driver is configured to provide the first signal in one portion of the clock signal (first half of the clock cycle) and the second signal in another portion of the clock signal (second half of the clock cycle); wherein the one portion is one half cycle of the clock signal and the second portion is another half cycle of the clock signal.

Method claims 13 and 14 correspond to detailed circuitry already discussed similarly with regard to claim 1.

Claims 15 and 16 correspond to detailed circuitry already discussed similarly with regard to claim 1.

Claim 23 corresponds to detailed circuitry already discussed similarly with regard to claim 1.

Claims 26 and 27 correspond to detailed circuitry already discussed similarly with regard to claim 1.

3. Claims 19, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 11, 12, 17, 18, 20-22 and 28-31 appear to comprise allowable subject matters.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-8, 13-16, 19, 26, 27, and 31 have been considered but are moot in view of the new ground(s) of rejection.

The newly applied reference of Choi anticipates all claimed features of claims 1-10, 13-16, 23, 26 and 27 under 35 U.S.C. 102(e), as discussed above.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


7. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vibol Tan whose telephone number is (571) 272-1811. The examiner can normally be reached on Monday-Friday (7:00 AM-4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike J. Tokar can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**VIBOL TAN**  
**PRIMARY EXAMINER**